

IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MISSOURI
CENTRAL DIVISION

MISSOURI COALITION FOR THE
ENVIRONMENT,
a non-profit corporation,

PLAINTIFF,

v.

ANDREW R. WHEELER, Administrator,
United States Environmental
Protection Agency,

DEFENDANT.

Case No. 2:19-cv-04215-NKL

**EPA'S SUGGESTIONS IN SUPORT OF ITS CROSS-MOTION FOR
SUMMARY JUDGMENT AND IN OPPOSITION TO PLAINTIFF'S
MOTION FOR SUMMARY JUDGMENT**

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GLOSSARY

APA	Administrative Procedure Act
AR	Administrative Record
CWA	Clean Water Act
EPA	Environmental Protection Agency
EPA SOF	EPA Statement of Uncontroverted Facts
Ex.	Exhibit (to EPA's Suggestions)
MCE	Plaintiff, Missouri Coalition for the Environment
MDNR	Missouri Department of Natural Resources
Pl. Ex.	Exhibit (to Plaintiff's Suggestions)
Pl. SOF	Plaintiff's Statement of Uncontroverted Facts
TN	Total Nitrogen
TP	Total Phosphorous
TSD	Technical Support Document
µg/L	Micrograms per Liter
WQS	Water Quality Standards

Defendant, Andrew Wheeler, Administrator of the United States Environmental Protection Agency (hereinafter “EPA”), submits these Suggestions in support of EPA’s Cross-Motion for Summary Judgment and in response to Plaintiff’s Motion for Summary Judgment and its supporting Suggestions (“Pl. Br.” Doc. 57).

In accordance with Local Court Rule 56.1(a), EPA submits the following statement of uncontroverted material facts.

STATEMENT OF UNCONTROVERTED MATERIAL FACTS

Statutory Structure and Requirements

1. The Clean Water Act (“CWA”) is a “complex statutory and regulatory scheme . . . [that] establishes distinct roles for the Federal and State Governments.” *PUD No. 1 of Jefferson Cty. v. Wash. Dep’t of Ecology*, 511 U.S. 700, 704 (1994). Under this structure of “cooperative federalism,” States have “primary responsibility for abating pollution in their jurisdictions.” *Chevron U.S.A., Inc. v. Hammond*, 726 F.2d 483, 489 (9th Cir. 1984).
2. “It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, [and] to plan the development and use (including restoration, preservation, and enhancement) of land and water resources.” 33 U.S.C. § 1251(b). These principles of cooperative federalism enable states, “within limits established by [the statute], to enact and administer their own regulatory programs, structured to meet their own particular needs.” *Hodel v. Virginia Surface Mining and Reclamation Ass’n, Inc.*, 452 U.S. 264, 289 (1981).
3. As part of this partnership, the “primary responsibility for establishing appropriate water quality standards is left to the states.” *Nat. Res. Def. Council, Inc. v. U.S. EPA*, 16 F.3d 1395, 1399 (4th Cir. 1993). *See also* 33 U.S.C. § 1313(a).

4. In establishing water quality standards (“WQS”), states first identify the “designated uses” of each waterbody. Designated uses generally can include aquatic life, recreation, and public water supply (drinking water). 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.3(f), (i); 131.10. *See also El Dorado Chemical Co. v. EPA*, 763 F.3d 950, 953 (8th Cir. 2014). Designated uses are assigned to each specific waterbody, and thus different lakes within a state may have different designated uses.

5. States then establish water quality criteria for various pollutants, which are designed to be protective of each waterbody’s designated uses. 40 C.F.R. § 131.3(b).

6. Finally, states are to develop policies and take actions to minimize or prevent degradation of water quality. 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.10-12.

7. Each State must submit its water quality standards to EPA for review. 33 U.S.C. § 1313. The review of a state’s submission does not, except as noted directly below, allow EPA to impose its own standards or nationwide standards. Instead, consistent with the cooperative federalism structure of the CWA, when a state submits water quality standards, EPA’s responsibility is to either approve or disapprove the proffered standards, based on their consistency with statutory requirements. 33 U.S.C. § 1313(c)(3) (“If the Administrator ... determines that such standard meets the requirements of this chapter, such standard shall thereafter be the water quality standard for the applicable waters of that State.”). *See also El Dorado*, 763 F.3d at 956 (“Under the CWA, the EPA must determine whether a state’s water quality standard is ‘consistent with the [CWA’s] requirements.’; 33 U.S.C. § 1313(a)(3)(C), (c)(2)(A).”).

8. If upon review EPA determines that the standards do not meet statutory requirements, EPA must specify the changes needed to meet those requirements. 33 U.S.C. §

1313(c)(3). If the State does not revise its standards accordingly or establish a new set of standards and submit them for EPA approval, EPA is tasked with promulgating its own standards for the state. 33 U.S.C. § 1313(c)(4).

The Challenge in This Case – Nutrient Criteria for Missouri Lakes

9. This case involves a challenge by Plaintiff, Missouri Coalition for the Environment (“MCE” or “Plaintiff”), to EPA’s approval of certain water quality standards established by the State of Missouri (“State” or “Missouri”) for approximately three hundred lakes with surface areas of at least 10 acres. Ex. 1 (Decision Doc.) pp. 3-4.¹

10. More specifically, Plaintiff challenges EPA’s approval of the nutrient criteria that the State established for the subject lakes. Nutrients, generally total nitrogen (“TN”) and total phosphorus (“TP”), can be beneficial to aquatic life in lakes because they promote growth of submerged aquatic vegetation, algae and other organic material which form a basis for healthy lake environments. Ex. 2 (2017 Rationale) pp. 22-23. For instance, at certain levels, TN and TP can increase the biomass of certain fish and result in a more productive community of fish and other aquatic life. *Id.* However, excessive amounts of nutrients can cause algal blooms and eutrophication, reducing needed dissolved oxygen (“DO”), affecting pH levels, and otherwise impacting the health of fish and other aquatic life, drinking water, or other waterbody uses. “Water Quality Standards for the State of Missouri’s Lakes and Reservoirs; Proposed Rule,” 82 Fed Reg. 61,213, 61,214-15 (Dec. 27, 2017) (“Proposed Rule”) (Ex. 8).

11. As with all water quality standards, EPA must approve a state’s nutrient criteria if they are consistent with the requirements of the CWA. 33 U.S.C. § 1313(a)(3)(C), (c)(2)(A). In making this determination EPA is to assess whether: (a) the state adopted criteria with

¹ The State previously issued (and EPA approved) numeric nutrient criteria for 25 specific lakes in the State. Those criteria are not at issue here.

parameters that are sufficiently protective of the state-assigned designated uses; (b) the criteria are based on a sound scientific rationale; and (c) the state followed its legal procedures for adopting criteria. *Id.*; 40 C.F.R. §§ 131.5, 131.6, 131.21(b), 131.11(a)(1) (States are to develop water quality criteria that are “based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use.”).

12. The CWA does not require nutrient criteria to be expressed as numeric limits on a given nutrient. Instead, nutrient criteria, like all water quality criteria, may be “expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use.” 40 C.F.R. § 131.3(b). *See also* 33 U.S.C. §§ 1313(c)(2), (d)(4)(B); Ex. 1 (Decision Doc.) p. 2 (“States are not required by the CWA to adopt numeric nutrient criteria....”).

13. The two main nutrients addressed under the CWA, TN and TP, are known as “causal criteria,” because they initiate a sequence of biological, chemical and ecological processes that can cause degradation of water quality when added to a waterbody in excessive amounts. Accordingly, a state may establish criteria that limit these nutrients in a waterbody to a specific numeric level, generally measured in micrograms per liter (“µg/L”). 82 Fed Reg. at 61,218 (Ex. 8).

14. The relationship of TN and TP to algal responses and waterbody health can, however, vary due to many different influences, including, *inter alia*: temperature, mineral turbidity, light availability, depth of the waterbody, precipitation, land uses, hydrology, flushing rates, and various other factors. Ex. 2 (2017 Rationale) pp. 1, 5.

15. Accordingly, a state may also establish “response criteria,” which is a measure of the biological, chemical or ecological outcomes in a waterway due to the presence or addition of

nutrients (TN or TP). *Id.* The use of response criteria can be important in establishing a state's nutrient criteria because "the specific levels of TN and TP that adversely affect designated uses . . . may vary from waterbody to waterbody, depending on many factors, including geomorphology and hydrology among others." 82 Fed. Reg. at 61,218 (Ex. 8).

16. Chlorophyll-a concentration is a measurement of the primary productivity of a waterbody that is indicative of the extent of effects of nutrients in the water, and thus is characterized as a "response criterion." *Id.* It is typically delineated in numeric form when used as a nutrient criterion.

17. Chlorophyll-a is not the only response criterion. A state may also "establish narrative criteria . . . to supplement numerical criteria." 40 C.F.R. § 131.11(b)(2). *See also* 33 U.S.C. § 1313(c)(2)(B), (c)(4)(B); 40 C.F.R. § 131.11(a)(2). Narrative criteria may include, for example, shifts in aquatic diversity due to eutrophication. Ex. 1 (Decision Doc.) p. 7. While narrative criteria are not permitted as the sole criteria for toxic (non-nutrient) pollutants in certain circumstances or where the Administrator determines that numeric criteria are necessary to meet the Act's requirements. 33 U.S.C. § 1313(c)(2)(B), (4)(B), neither of those situations is present here.

18. As of 2017, at least three states had adopted – and EPA had approved – a "combined criterion" approach for nutrients, which is a mix of causal and response parameters expressed as one criterion. 82 Fed. Reg. at 61,218/1 (Ex.8). Because different waterbodies have different tolerances to nitrogen (TN) and phosphorus (TP), "the combined approach can provide greater precision when there is heightened variability in waterbodies' response to nutrients." *Id.*

19. In 2013, EPA issued a guidance document (labeled "guiding principles") presenting an optional approach for developing nutrient criteria that integrates causal and

response parameters, including biological and chemical endpoints. Ex. 4 (“2013 Guidance”).

The 2013 Guidance, which is non-binding and outlines a “combined criterion” approach, states, *inter alia*:

A. “EPA recognizes that developing numeric values for both nitrogen and phosphorus may present challenges associated with temporal and spatial variability (p.1);”

B. “These guiding principles apply when states wish to rely on response parameters to indicate that a designated use is protected, even though a nitrogen and/or phosphorus level is/are above an adopted threshold” (p. 1);

C. Parameters may include “biological response parameters” including “assessment endpoints” to be used in a “suite of response variables,” and can include, for instance, “measures of primary productivity” and levels of pH and dissolved oxygen (p. 2);² and

D. “Appropriate type and quantity of response parameters may vary by state, ecosystem, and waterbody type” (p. 2).

20. EPA’s 2013 Guidance recommends that “[a]ll causal and response parameters should be expressed numerically” but simultaneously acknowledges that the “[a]ppropriate type and quantity of response parameters may vary by state, ecosystem and waterbody type.” *Id.* In establishing a combined criterion, a state should base the numeric components of the combined criteria on: (a) EPA’s 2013 Guidance on establishing numeric criteria (termed 304(a) Guidance); *or* (b) 304(a) Guidance “modified to reflect site-specific conditions;” *or* (c) “other scientifically defensible methods.” 40 C.F.R. § 131.11(b)(1). Thus, while the 2013 Guidance provides certain

² EPA prefers the term combined criteria rather than the term “Bioconfirmation approach” because the response parameters may not all reflect biological activity (e.g. fish kills, lack of biodiversity), such as levels of dissolved oxygen and pH, which are chemical. Ex. 1 (Decision Doc.) p. 2 at n. 1, p. 21.

suggestions on how to formulate and organize a combined criterion, a state may modify those suggestions or simply establish such criterion based on any “scientifically defensible method.”

Missouri’s Regulatory Actions

21. On November 5, 2009, Missouri submitted nutrient criteria for review by EPA, in the form of a methodology that would be used to derive numeric criteria for TN, TP and chlorophyll-a for certain lakes and reservoirs. This was a unique approach. At that time “no other state had in place statewide lake numeric criteria for TN, TP and chlorophyll-a.” Ex. 2 (2017 Rationale) p. 2.

22. On August 16, 2011, EPA disapproved the State’s criteria, finding that it could not conclude that the State’s submission was “based on a sound scientific rationale because it does not include the data and other necessary information to allow others to independently reproduce the work.” Ex. 6 (“2011 Disapproval”) p. 27. In addition, EPA found that the submission “fail[s] to demonstrate that the values or approaches to numeric nutrient criteria will protect the designated aquatic life or recreational uses.” *Id.* at 27-28. In its disapproval, EPA specified the following changes necessary to meet CWA requirements: “The state must revise the criteria to clearly indicate which designated uses the criteria is intended to protect as well as supporting documentation to indicate that the criteria in fact will fully support the associated use. Additionally, supporting documentation needs to include the raw data and resulting statistical analyses so that the EPA may evaluate the soundness of the scientific rationale and protectiveness of the criteria pursuant to the requirement found at 40 CFR § 131.11(a)(1).” *Id.* at 28.

23. While EPA described different modeling approaches that could be used to generate the missing data, it made clear that the State could pursue a completely different

approach in responding to EPA's disapproval: "The Agency would also support the state if they chose to modify their criteria beyond the original framework established within their Rationale, and offers assistance to develop such additional lines of evidence and analyses" *Id.* at 29.

24. Following the 2011 Disapproval, the State generated and considered, with public involvement as well as comments from many parties including EPA, a number of different iterations of draft nutrient criteria. *See, e.g.*, Pl. Ex. 4 (2015 Rationale document supporting one earlier draft). None of these earlier drafts were adopted by the State or submitted to EPA for approval.³

25. The State ultimately settled on the nutrient criteria that are the subject of this case and published them for public comment. After considering public comments and following other State procedures, on April 13, 2018, Missouri submitted for EPA review and approval a new set of nutrient criteria (the "Challenged Criteria"). Ex. 7. The State's explanation of the data reviewed and analyses performed to generate the nutrient criteria appears in a separate document labeled "December 2017 Rationale." Ex. 2.

26. Unlike in 2011, where EPA disapproved the State's adopted criteria on the central basis that the State failed to demonstrate that the criteria will protect the designated uses and include data sufficient for EPA to determine whether the criteria were scientifically sound, for the 2018 Challenged Criteria the State collected and/or relied upon substantial data and review of scientific literature. These data included, for instance, water quality sampling comprising 67,000 records from over 200 State reservoirs over 15 years, including 32,000 records of chlorophyll-a nutrient data, along with laboratory analysis of such data. *Id.* at 11. The State further classified

³ The State's efforts relating to the promulgation of water quality standards for lakes that occurred between EPA's disapproval in 2011 and the State's adoption of the criteria submitted to EPA for approval on April 13, 2018 that are the subject of this action, are generally irrelevant (*see discussion infra*). Nevertheless, Plaintiff cites to such drafts and comments thereon, which EPA addresses in its responses to Plaintiff's Statement of Uncontroverted Facts, *infra*.

its lakes by various geographically-based categories related to prevailing trophic conditions, noting chlorophyll-a limits for each category. *Id.* at 12.

27. The State performed regression analyses to estimate chlorophyll-a levels as a function of TP and TN. *Id.* at 14. These analyses effectively demonstrated a relationship between TP and chlorophyll-a and between TN and chlorophyll-a, but they also demonstrated the substantial variability that exists in those relationships. *Id.* at 17-18. This lack of precision is why states may be interested in a combined criterion approach that incorporates response variables such as chlorophyll-a to help make designated use attainment decisions. For instance, as a measure of algal biomass and primary productivity, chlorophyll-a is directly linked to aquatic life and recreational uses and can provide important information to the state on the condition of the waterbody for designated use attainment. USEPA 2000a, *Nutrient Criteria Manual: Lakes and Reservoirs*, EPA-822-B-00-001.

28. The State also noted that in comparison to the protection of aquatic life, the data linking nutrient concentrations to safe drinking water and human health protection as well as links to recreational uses were much more limited. Ex. 2 (2017 Rationale) p. 19.

29. Based on these data and analyses, the State submitted new nutrient criteria (the Challenged Criteria) for EPA approval. In contrast to the nutrient criteria expressed as a methodology that EPA disapproved in 2011, this time the State adopted stand-alone chlorophyll-a criteria, as well as a combined criterion approach that applies a stepped decision framework to be applied on a lake-by-lake basis. Ex. 1 (Decision Doc.) pp. 4-7.

30. Missouri's new lake criteria first divides the State into three ecoregions (areas with similar ecological characteristics): the Plains, the Ozark Border, and the Ozark Highland.

This structure allowed the State to conform nutrient parameters to the ecological and biological characteristics of each ecoregion, setting different standards for each ecoregion. *Id.*

31. The State then generated stand-alone criteria for chlorophyll-a in the form of Response Impairment Thresholds. A finding that a lake exceeds the chlorophyll-a threshold would result in the lake being deemed impaired, which would thereby trigger the protective and corrective actions required by the CWA, such as listing waters as impaired pursuant to 33 U.S.C. § 1313(d). *Id.* Thus, for example, the “impairment threshold” for chlorophyll-a for lakes in the Ozark Highland ecoregion is 15 micrograms per liter (15 µg/L). If water sampling reveals levels of chlorophyll-a above this level, the lake will be deemed impaired. *Id.*

32. Each ecoregion is further assigned a TN, TP, and chlorophyll-a “Nutrient Screening Threshold.” For instance, lakes in the Ozark Highland ecoregion have the following screening thresholds: TN – 401 µg/L; TP – 16 µg/L; and chlorophyll-a – 6 µg/L. *Id.*

33. If *any* of the TN, TP or chlorophyll-a nutrient screening thresholds is exceeded and the lake is not already deemed impaired because it exceeds the stand-alone chlorophyll-a Response Impairment Threshold, the State will analyze five “Response Assessment Endpoints” (“Response Endpoints”), which reflects the “trigger” structure recommended in EPA’s 2013 Guidance. *Id.*

34. The Response Endpoints in the Challenged Criteria include: (a) morbidity or mortality events for fish and aquatic life; (b) shifts in the amount of dissolved oxygen or pH criteria; (c) cyanobacteria counts in excess of 100,000 cells per milliliter; (d) shifts in aquatic diversity due to eutrophication; and (e) excessive levels of mineral turbidity that limit algal productivity. *Id.* If *any* of the five Response Endpoints is identified in the same year that *one* of the three Nutrient Screening Thresholds is exceeded, the lake is deemed impaired. *Id.*

35. The State elected to use a combined criterion approach utilizing Nutrient Screening Thresholds to apply an individualized approach for its lakes, which differs from an approach using a single numeric impairment threshold established for all lakes within an ecoregion or a state. Ex. 2 (2017 Rationale). Utilizing this individualized approach, which considers more factors than a simple TN and TP limit for all lakes, is one of the purposes of using combined criterion and a basis for EPA generating its 2013 Guidance on the use of combined criterion. Ex. 4 (2013 Guidance) p. 1.

36. The State based its causal and response parameters, both numeric and narrative, on the protection and propagation of aquatic life and habitat. Ex. 2 (2017 Rationale) pp. 20-25.

EPA's Approval of the Challenged Criteria

37. Under the terms of the settlement of a lawsuit brought by MCE, EPA was required to promulgate nutrient criteria for Missouri lakes if EPA did not approve a revised or new State-adopted set of criteria. Pl. Br. pp. 5-6. Although EPA's ultimate approval of the State's Challenged Criteria alleviated EPA's obligation to promulgate nutrient criteria for Missouri, EPA was required under the Consent Decree issued by this Court to propose criteria to address the 2011 Disapproval, because the State had not yet adopted or submitted approvable criteria. Accordingly, EPA published a Proposed Rule that included two alternatives: (a) Alternative 1, EPA's own set of proposed criteria; and (b) Alternative 2, which closely mirrored the State's proposal (i.e., the Challenged Criteria) that EPA ultimately approved. 82 Fed. Reg. 61,213 (Dec. 27, 2017) (Ex. 8). EPA also issued a technical support document ("TSD") to support Alternative 1. Ex. 9.

38. EPA's Alternative 1 (like the State's Challenged Criteria that EPA ultimately approved), proposed a combined criterion that included both causal parameters (TP and TN) and

response parameters (chlorophyll-a), along with additional response parameters (e.g., levels of pH and dissolved oxygen, levels of cyanobacteria, presence of turbidity, shifts in aquatic diversity, fish mortality/morbidity events) that EPA explained “could be added to a package of nutrient water quality standards to be indicative of impairment.” Ex. 9 (TSD) p. 32. EPA explained that such additional response parameters could prove significant in assessing water quality in Missouri lakes because effects on designated uses from elevated levels of TN and TP vary from waterbody to waterbody based on many factors. *Id.*

40. On April 13, 2018, the State submitted its newly adopted nutrient standards for EPA approval. Ex. 7. In the context of both reviewing the nutrient criteria reflected in the State’s submission and generating its own proposed criteria, EPA reviewed, considered and analyzed data from multiple sources. Ex. 9 (TSD) pp. 2-9. EPA also reviewed multiple studies on issues such as protection of aquatic life. Ex. 1 (Decision Doc.) pp. 14-16, 27-30. EPA also reviewed public comments, both those submitted on its own proposal and those submitted to the Missouri Department of Natural Resources (“MDNR”) on the Challenged Criteria. Ex. 1 (Decision Doc.) pp. 7-8, Appx. pp.1-4.

41. After a full review of Missouri’s nutrient standards and the record supporting it (Index at Ex. 3), on December 14, 2018, EPA approved the State’s nutrient standards. EPA concluded that in contrast to the State’s earlier criteria disapproved in 2011, the new nutrient standards were scientifically sound and complied with statutory and regulatory requirements. Ex. 1 (Decision Doc.).

42. In approving the Challenged Criteria, EPA’s decision document made a number of conclusions, including noting how the State’s new submission addressed or otherwise made

irrelevant the criticisms raised in EPA's 2011 disapproval of the State's numeric criteria submission. Among EPA's conclusions were:

A. Because the State's new submission did not use a reference condition or modeling approach, the direction in EPA's 2011 Disapproval letter calling for the State to submit raw data and statistical analyses was irrelevant or unnecessary because MDNR relied primarily on scientific literature and established correlations between chlorophyll *a* and TN and TP. Ex 1 (Decision Doc.) pp. 8-9;

B. Unlike the standards that were the subject of the 2011 Disapproval, the new standards clearly identify aquatic life as the designated use formulating the basis for the specific criteria generated. *Id.*

C. Unlike the standards that were the subject of the 2011 Disapproval, the Challenged Criteria were more specifically geared to ecoregions, setting different nutrient criteria for each ecoregion. *Id.*

D. Unlike the standards that were the subject of the 2011 Disapproval, the Challenged Criteria satisfied EPA's requirement to submit the "methods and analyses conducted," such that EPA could properly analyze whether the criteria are based on a sound scientific rationale. *Id.*

STATEMENT OF FACTS GENUINELY IN ISSUE

EPA notes that much of Plaintiff's Statement of Undisputed Facts ("Pl. SOF") is irrelevant, as the statements deal with processes and communications related to the criteria that were the subject of the 2011 Disapproval and to various subsequent drafts of nutrient criteria that were never adopted and that are not the subject of this case. The issue in this case is whether EPA's approval of the nutrient criteria actually approved by EPA on December 14, 2018, i.e., the

Challenged Criteria, is arbitrary and capricious based on the administrative record. Nevertheless, in accordance with Local Court Rule 56.1(b)(1), EPA responds to Plaintiff's Statement of Facts set forth at Pl. Br. pp 1-12, as follows:⁴

1. EPA admits that water quality nutrient criteria can be either numeric or narrative (or a combination of the two). Plaintiff incorrectly describes narrative criteria as only "describing undesirable colors or smells." Narrative criteria are not so restricted under 40 C.F.R. Part 31, Subpart B as cited by Plaintiff and instead can include various narrative criteria that assist in establishing the health of a waterbody with regard to effects from nutrients. As reflected in the Challenged Criteria, Missouri's narrative criteria declare, *inter alia* that "[w]aters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal, or aquatic life. . . , [t]here shall be no significant human health hazard from incidental contact with the water. . . ," and [w]aters shall be free from physical, chemical, or hydrologic changes that would impair the natural biological community." 10 CSR § 20-7.031(4)(d), (F), (H).

Plaintiff also incorrectly describes numeric criteria as a "numeric limit above which it [a waterbody] is not safe to use." Although the term "numeric criteria" is sometimes used in this manner, the term is not so limited. EPA regulations define criteria as "constituent concentrations, levels, or narrative statements, representing a quality of water that supports a

⁴ The parties have cross-moved for summary judgment pursuant to Fed. R. Civ. P. 56. While summary judgment typically can be granted only where there are no genuine issues of material fact, the process is different where summary judgment is sought with regard to an agency decision under the Administrative Procedure Act ("APA"). In such a challenge, the facts are essentially established in the administrative record and the only question for the Court is whether the agency's decision based on that record was arbitrary and capricious (or otherwise in violation of APA standards). 5 U.S.C. § 706(2)(A). Accordingly, typical rules for summary judgment, which prohibit a ruling if material facts are in dispute, do not apply. *Am. Bioscience, Inc. v. Thompson*, 269 F.3d 1077, 1083 (D.C. Cir. 2001); *Occidental Eng'g Co. v. INS*, 753 F.2d 766, 770 (9th Cir. 1985). See also Pl. Br. p. 12.

particular use.” 40 CFR § 131.3(b). Numeric water quality criteria refer to just that, criteria that are numeric in form. Such criteria can be a numeric value above which a water is deemed as not supportive of the designated use (states commonly use the term impaired) or, in the case of a combined criterion, it can be a numeric value above which analysis of other parameters within the combined criterion are triggered. *See* EPA SOF 33, *supra*.

2. EPA agrees that excessive levels of nitrogen and phosphorus can cause degradation of water quality through, e.g., excessive growth of algae and hypoxia. At the same time, certain levels of nutrients such as nitrogen and phosphorus promote the health of a waterbody and support the health and propagation of aquatic life. *See, e.g.,* Ex.2 (2017 Rationale) p. 22, noting that certain levels of chlorophyll-a, which reflect effects of nitrogen and phosphorus, increase algal biomass, which in turn helps support a healthy population of fish and other aquatic life in Missouri’s lakes. EPA admits that it has generated guidance to assist states in their adoption of nutrient criteria and that it encourages the use of numeric criteria as one measure to protect and restore designated uses when they can be accurately applied. EPA denies that it has “pledged” to enact numeric nutrient criteria if states are unable to do so. The material cited by Plaintiff to support this statement (AR002-004) makes no such declaration. As noted at EPA SOF 12, 20, *supra*, states are, under specific statutory and regulatory provisions, free to utilize numeric nutrient criteria, narrative nutrient criteria, or a combination of the two. Pursuant to 33 U.S.C. §1313, EPA will promulgate water quality criteria for a state if the state fails to submit approvable criteria on its own, but nothing in the statute requires EPA to promulgate only numeric criteria for nutrients.

3. EPA disputes that the State’s narrative criteria were limited to the factors Plaintiff’s described. *See* EPA response to Pl. SOF ¶ 1, *supra*.

4. EPA admits that Plaintiff correctly includes partial quotes from its 2011 disapproval of the State's 2009 adopted nutrient criteria (2011 Disapproval) and notes that those disapproved criteria are not at issue in this case. EPA disapproved the criteria in 2011, not because it found that the data did not support the criteria, but primarily because the State's submission did "not include the data and other necessary information to allow others to independently reproduce the work," concluding that absent this information it was not in a position to "determine that the approach and resulting criteria are based on a sound scientific rationale." Ex. 6 (2011 Disapproval) p. 27. *See also* p. 28, describing some of the missing data and statistical analyses required for EPA to determine whether the State's submission met CWA requirements. EPA also found that the State failed to identify which designated uses the criteria were designed to protect. *Id.* at pp. 27-28.

5. EPA admits the first sentence of paragraph 5. EPA denies that the block quoted language appears in the exhibit cited by Plaintiff, Pl. Ex. 1, AR 3007, and denies that the quoted language reflects the specified "changes needed to meet [CWA] requirements" in EPA's 2011 Disapproval. It instead describes matters the State should "take into account" should it resubmit the same criteria or submit a similar framework. Pl. Ex. 1. EPA admits that the second document cited by Plaintiff, Pl. Ex. 2 (AR 7318-19), provides guidance to states in establishing nutrient criteria and the latitude states have in doing so, specifically declaring: "The criteria setting process and water quality standards regulations allows states to: (1) develop their own criteria which reflect more locally representative conditions; (2) use different techniques to develop criteria as long as they are protective of designated uses and scientifically defensible; and (3) conduct use attainability studies and refine their use designations." *Id.* at AR 7319.

6. EPA admits that after EPA's 2011 disapproval of Missouri's proposed nutrient criteria, the State worked on multiple drafts of new criteria, worked and communicated with EPA and stakeholders (including Plaintiff) regarding the various drafts, and held public meetings and received input on these drafts. These early drafts were modified and evolved throughout the rulemaking process and only the final draft and proposal was submitted on April 13, 2018 and is the subject of this action. EPA admits that chlorophyll-a is not itself a nutrient but instead is a measure of the effect of nutrients in a given waterbody which evidences the response of the causal pollutants. Hence, chlorophyll-a is used as a numeric criterion in many states, which EPA has approved.

7. EPA admits that under 33 U.S.C. § 1313(c), if a State does not revise its criteria after EPA specifies the necessary changes, EPA is to promptly propose and promulgate its own criteria applicable to the State's waterbodies at issue, "unless prior to such promulgation, such State has adopted a revised *or new* water quality standard which the Administrator determines to be in accordance with this chapter." *Id.* (emphasis added). EPA denies that it is specifically required to promulgate "numeric nutrient criteria," as Plaintiff asserts, as there is nothing in this provision or any other provision of the Clean Water Act requiring EPA to promulgate *numeric* nutrient criteria. *See* EPA SOF, ¶¶ 12, 20, *supra*.

8. EPA admits that in 2015 the State generated a draft Rationale document (Pl. Ex. 4) related to draft nutrient standards it was considering at that time and that, according to that document, the State's efforts were concentrated on the protection of aquatic life and drinking water. EPA notes that the State generated at least two subsequent Rationale documents supporting its subsequent draft proposed nutrient criteria, including a 2016 Rationale and EPA Ex. 2 (the 2017 Rationale), which is the State's Rationale document supporting the Challenged

Criteria that are before the Court. In response to the second sentence of paragraph 8, EPA further notes that a state is required to generate criteria that are protective of the most sensitive use, so that, for instance, if aquatic life is the most sensitive use, a standard set to protect that use should also be protective of other uses, such as drinking water and recreation.

9. EPA denies the allegations of Paragraph 9, as the State proposed screening values for TN and TP in numeric form (numeric criteria) based on data and calculations performed on such data. Ex. 2 (2017 Rationale). EPA admits that the proposal did not include numeric Response Impairment Thresholds for TN or TP.

10. EPA admits the allegations in Paragraph 10 except that the requirements described only apply when impairment is confirmed by multiple parameters within a combined criterion, not when any numeric value within a combined criterion is exceeded. EPA denies the statement that numeric Nutrient Screening Thresholds are not criteria. EPA further notes again that the referenced document does not contain the Challenged Criteria at issue in this case. The manner in which Response Impairment Thresholds and Nutrient Screening Thresholds in the Challenged Criteria apply is set forth at EPA's SOF at ¶¶ 30-36, *supra*.

11. Uncontroverted.

12. EPA admits that the State considered that, given the varied nature of the many (approximately 300) lakes subject to the nutrient standards being developed, exclusive application of numeric impairment levels of TN and TP could result in false findings, which the State explained as follows: "Using chl-a avoids falsely identifying lakes as impaired where nutrient levels may be high, but algal production is constrained by low autotrophic potential (e.g., fast flushing and low critical depth." Pl. Ex. 4 at 17 (AR3081). EPA denies the implication that other forms of aquatic life would not be protected. As stated in the Decision

Document: “The studies summarized above demonstrate that, as a general matter, as nutrient levels increase in a lake system, algal growth and fish biomass also increase, with increasing abundance of most, if not all, fish species. At the same time, as overall productivity increases there can be a shift in the relative proportion of species present in a lake....” Ex. 1 (Decision Doc.) p. 16.

13. EPA admits that in generating some of its post-2011 proposals, the State, as is its right, took a different approach to deriving nutrient criteria, and hence was not required to adopt the methods that EPA recommended in its 2011 Disapproval. A state is not required to directly respond to EPA’s criticisms of elements of a proposal that are no longer being considered. 33 U.S.C. § 1313(c).

14. EPA admits that in a letter dated May 12, 2016, EPA staff expressed concerns with certain elements of the State’s 2015 draft criteria. Such exchanges are part of the normal process by which a state considers and ultimately submits for EPA approval a final set of nutrient or other water quality criteria. This letter reflects EPA’s “preliminary written comments” on a prior State draft that is not the subject of this action. Ex. 10 (May 12, 2016 letter). The State later submitted a different set of criteria and it is that new proposal that EPA approved and that MCE is challenging in this case. Further, the State’s proposal evolved considerably after receiving comments from EPA and others. Compare, e.g., Pl. Ex .4 (September 2015 Rationale,) with Ex. 2 (Dec. 2017 Rationale). It is in this last document in which the State explains and provides support for its combined criterion approach that is being challenged in this action.

15. EPA admits that, as outlined in Plaintiff’s paragraph 14, the May 12, 2016 letter was a preliminary view of EPA staff of a preliminary draft of the State, not a final position of the Agency as implied in Paragraph 15. EPA notes that this letter encouraged Missouri to “revisit

the assumptions and analyses” and address any concerns raised by the comment letter, and that Missouri then revised its early draft, culminating in the Challenged Criteria. EPA’s letter further notes that its final decision document on the Challenged Criteria addresses specifically the “screening threshold components” and finds that together with the “response assessment endpoints,” they reflect an appropriate floor below which adverse impacts from nutrient pollution should not occur, and thus EPA was confident that the combined criterion is protective of aquatic life in Missouri. Ex. 1 (Decision Doc.) p. 20.

16. EPA admits that in its 2016 letter EPA staff pointed out that the “weight of the evidence” element of the contemplated criteria, which are applied after numeric criteria are applied, were narrative criteria, which are in part qualitative. EPA notes that the actual Challenged Criteria contemplate numeric values for various response parameters that comprise the full suite of response variables recommended in EPA’s 2013 Guidance, including values for dissolved oxygen, pH and chlorophyll-a (as a measure of primary productivity) and cyanobacteria counts (as a proxy for algal assemblage). Ex. 1 (Decision Doc.) pp. 17-25.

17. EPA admits that the May 12, 2016 letter encouraged the State to revisit some assumptions and analyses, including different ways to address variability and whether criteria geared toward protection of sport fish is sufficient to protect other aquatic organisms. Ex. 10. As outlined *infra*, the State’s submission of the Challenged Criteria in 2018 and its supporting documentation address these issues. Ex. 1 (Decision Doc.) at Appx. p. 2.

18. Uncontroverted.

19. EPA clarifies that the Consent Decree required new or revised water quality standards addressing EPA’s August 16, 2011 disapproval of Missouri’s numeric nutrient criteria

for Missouri lakes as of the dates outlined therein. That Decree did not restrict EPA to drafting only numeric criteria.

20. The election of various officials is irrelevant to the single issue in this case: whether it was arbitrary and capricious for EPA to determine that the Challenged Criteria are scientifically sound, adequately protect designated uses, and otherwise comply with statutory and regulatory requirements. EPA is without sufficient knowledge to determine when the State took various actions that culminated in its submission of the Challenged Criteria. EPA is aware that during the intervening years leading up to its April 2018 submission of the Challenged Criteria, the State engaged with various stakeholders, including environmental groups, in an effort to propose a new set of criteria appropriate for Missouri lakes and generated multiple drafts of potential criteria. Ex. 2 (2017 Rationale) p. 2.

21. EPA denies the characterization in the first sentence of Paragraph 21 and admits the balance of Paragraph 21.

22. The communications referred to in Paragraph 22 relate to the state of mind of State officials and EPA is without sufficient information to admit or deny such allegations.

23. EPA admits that in order to ensure that it could comply with its Consent Decree requirements, it initiated steps to propose draft nutrient criteria. EPA clarifies that this was in parallel to Missouri's rulemaking procedures calculated to submit its own nutrient criteria, which it ultimately achieved with the submission of the Challenged Criteria. EPA corrects the values identified in paragraph 23. EPA's chlorophyll-a draft criterion included values of 9.8 for the Plains and 7.1 for the Ozarks. EPA denies that all of EPA's proposed chlorophyll-a nutrient criteria were stricter (i.e., lower) than the State's screening values, which is evident from the chart contained in Plaintiff's Paragraph 23.

24. EPA disputes the values identified as EPA's chlorophyll-a draft criterion in the table in Paragraph 24. EPA's chlorophyll-a draft criterion included values of 9.8 for the Plains and 7.1 for the Ozarks.

25. Uncontroverted.

26. EPA disagrees with MCE's characterization of Exhibits 16 and 17 and the implication that by August 2017 EPA had reached a conclusion regarding its May 12, 2016 letter or the approvability of the State's draft rule prior to submission. Exhibit 17 documents a pre-decisional meeting that occurred on August 25, 2017 with EPA and the State to discuss the State's general approach. Exhibit 16 includes an agenda for a pre-decisional meeting that occurred on August 30, 2017, that included technical staff from EPA and the State to discuss technical issues related to criteria that were under development by the State. It is normal practice for EPA to respond to a state's inquiries and communicate with a state that is in the process of drafting water quality criteria, since the goal is for the state to submit criteria that comply with all federal statutory and regulatory requirements.

27. EPA admits that the State periodically revised its proposals for establishing nutrient criteria and that the Clean Water Commission finalized the State's proposed standards on January 4, 2018. EPA denies that it was prepared to approve the State's proposal (which was not submitted to EPA until months later) in August 2017, which is the date of the documents cited by Plaintiff. The cited documents actually call for further discussion of various issues.

28. EPA denies Plaintiff's assertion that EPA had reached a conclusion regarding the approvability of the State's draft rule prior to its submission in January 2018.

29. EPA admits that Alternative 1 represented EPA's proposal and Alternative 2 reflected the State's proposal. EPA further admits that its own proposal (Alternative 1) called for

a combined criterion and the application of Response Endpoints. EPA admits that the portion of the Technical Support Document (“TSD”) cited deals with combined criteria TN, TP and chlorophyll-a. EPA disagrees with Plaintiff’s inference that EPA had reached a conclusion regarding the approvability of the State’s draft rule prior to its submission. EPA discussed the technical basis for the combined criterion approach at length in its proposed rule. 82 Fed. Reg. at 61,220-24 (Ex. 8).

30. EPA admits that because the State completed its own nutrient standards and submitted them to EPA for approval in accordance with both statutory requirements and the Consent Decree reached in the earlier litigation, EPA did not finalize Alternative 1. EPA admits that it did not prepare a separate Technical Support document (TSD) for Alternative 2. Instead, following its typical practice when considering a State’s submission of nutrient criteria, EPA reviewed and analyzed the State’s submission, which included a technical support document labeled as the State’s 2017 Rationale. *See* EPA Ex. 2 (2017 Rationale).

31. EPA admits that the allegations in Paragraph 31 generally describes the Challenged Criteria that are at issue.

32. EPA admits the first two sentences of Paragraph 32. The third sentence of Paragraph 32 is incorrect. If a lake exceeds any of the three Nutrient Screening Thresholds (for Chlorophyll-a, TN or TP), it will be deemed impaired if it further meets any one of the five Response Endpoints. Ex. 1 (Decision Doc.).

33. EPA admits that, as in many cases, EPA staff communicated with the State and others to best understand the data and bases for the State’s criteria.

34. EPA admits that, as in many cases, EPA staff communicated with the State and others to best understand the data and bases for the State’s criteria.

35. All reports and documents (including the referenced studies) that EPA relied upon are in the Administrative Record. EPA is without sufficient knowledge to confirm the original source of each such study or document.

36. EPA admits that it received an Implementation Plan from the State dated July 27, 2018. EPA is not aware of what, if any, administrative rulemaking procedures the Implementation Plan was or was not required to go through. The Implementation Plan is not part of the Challenged Criteria that is subject to EPA's approval. It instead sets forth procedures that the State intends to use to implement the nutrient criteria once approved by EPA.

37. In explaining its decision approving the State's submission of the Challenged Criteria, EPA referred to various documents supporting the Criteria. EPA also discussed how those criteria, once approved, would be implemented and referred to the Implementation Document in connection with that discussion. EPA denies that it relied on the Implementation Document in approving the nutrient criteria themselves. The timing, nature and process for the State implementing those criteria was not the subject of EPA's review and approval of the Challenged Criteria.

38-41. EPA is without sufficient information to admit or deny the allegations in Paragraphs 38-41.

STANDARD OF REVIEW

Plaintiff brings this action under the Administrative Procedure Act (“APA”). Pl. Br. p. 12. Under the APA, an agency decision may only be set aside if the Court finds the “agency action, findings, and conclusions [] to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (“*State Farm*”).

The party asserting an APA challenge bears the burden of demonstrating that the agency’s decision was arbitrary or capricious. *Guaranty Sav. & Loan Ass’n v. Fed. Home Loan Bank Bd.*, 794 F.2d 1339, 1342 (8th Cir. 1986). “The scope of review under the ‘arbitrary and capricious’ standard is narrow and a court is not to substitute its judgment for that of the agency.” *State Farm*, 463 U.S. at 43. Agency actions are presumed valid, *Ethyl Corp. v. EPA*, 541 F.2d 1, 34 (D.C. Cir. 1976), and the “challenger must show the agency action is not a product of reasoned decisionmaking . . . [which] is ‘a heavy burden,’ since *State Farm* entails a ‘very deferential scope of review’ that forbids a court from ‘substitut[ing] its judgment for that of the agency.’” *Van Hollen, Jr. v. Fed. Election Comm’n*, 811 F.3d 486, 495 (D.C. Cir. 2016).

The deference to be accorded to the agency’s determination is particularly acute in a case such as this, where the determination (whether the State’s nutrient standards are sufficiently protective and based on sound science) is of a technical nature. *Lockhart v. Kenops*, 927 F.2d 1028, 1034 (8th Cir. 1991) (“[O]ur deference to the agency is greatest when reviewing technical matters within its area of expertise, particularly its choice of scientific data and statistical methodology.”); *Friends of the Norbeck v. U.S. Forest Serv.*, 661 F.3d 969, 976 (8th Cir. 2011) (When the administrative decision “requires a high level of technical expertise, we must defer to the informed discretion of the responsible federal agencies.”). In these circumstances, “[i]f an

agency's determination is supportable on any rational basis, we must uphold it." *In re Operation of the Missouri River System Litig.*, 421 F.3d 618, 628 (8th Cir. 2005) ("*Missouri River*"). See also *Nat'l Parks Conservation Ass'n v. McCarthy*, 816 F.3d 989, 994 (8th Cir. 2016).

ARGUMENT

Congress structured the CWA such that it gives states, not the federal government, the primary role in setting water quality standards. The CWA allows states to decide whether and how to adopt nutrient criteria and the form that they take. EPA's responsibility is to evaluate whether the state-developed criteria are scientifically sound and sufficiently protective of the state's designated uses. If EPA so finds, it must approve the criteria. See pp. 1-2, *supra*.

Here, as it does with other states, EPA provided guidance and feedback to Missouri to assist it in the process of adopting nutrient criteria. Then, upon receipt of the State's Challenged Criteria, EPA reviewed multiple scientific studies, analyzed the data, identified where reliable data was not available, and concluded that Missouri's nutrient criteria, while somewhat different from that utilized in some other states and structured differently than nutrient criteria that Missouri had submitted in the past, was based on scientifically sound principles, sufficiently protective, and consistent with the requirements of the Clean Water Act. While Plaintiff may disagree with EPA's conclusion, Plaintiff falls far short of establishing that EPA's technical determination is not "supportable on any rational basis." *Missouri River*, 421 F.3d at 628.

I. EPA'S APPROVAL OF MISSOURI'S LAKE NUTRIENT CRITERIA WAS RATIONAL AND FULLY CONSISTENT WITH EPA'S REGULATIONS REQUIRING THAT WATER QUALITY CRITERIA ARE SCIENTIFICALLY SOUND AND PROTECT THE DESIGNATED USE

There is no single approach mandated to formulate nutrient criteria. Approaches other than simply setting specific numeric Impairment Thresholds for TN and TP can be particularly appropriate in certain circumstances. Indeed, a given state may find that a stepped approach,

which considers both causal (TN and TP) and response (chlorophyll-a and other observable responses to nutrients) criteria, in both numeric and narrative form, is advisable for that state's waters. For instance, some waters can handle more TP and TN than others, such that aquatic life or other designated uses are not impacted at the same levels of these nutrients as they would be in other waters. Ex. 1 (Decision Doc.) p. 2. Indeed, the causal connection between the amount of TN and TP in a waterbody and their effect on designated uses can "vary from waterbody to waterbody, depending on many factors, including geomorphology and hydrology among others." *Id.* That is why a combined criterion approach (which was not proposed by Missouri in 2011) can make sense in certain states or portions thereof. It combines the chemical measures of causal numeric parameters (TN and/or TP) and response parameters (e.g. chlorophyll-a) to gain a broader understanding of the biological and chemical effects on a given waterbody.

While EPA encourages the use of numeric nutrient criteria, states are not required to adopt such criteria. The CWA and EPA's regulations permit states to address nutrient pollution through narrative (non-numeric) standards and/or combined criteria, so long as they are adequately protective of designated uses. 40 C.F.R. § 131.3(b); 33 U.S.C. §§ 1313(c)(2), (d)(4)(B); Ex. 1 (Decision Doc.) p. 2 ("States are not required by the CWA to adopt numeric nutrient criteria...."); EPA SOF 12, 20, *supra*. EPA has approved water quality standards in at least three states that have used a combined criterion approach, which rely on response criteria along with causal criteria. 82 Fed. Reg. at 61,218/1 (Ex. 8). "Under this approach, an exceedance of a causal variable [e.g., detection of TN or TP above a designated level] acts as a trigger to consider additional physical, chemical and biological parameters that serve as indicators to determine protection or impairment of designated uses." 82 Fed. Reg. at 61,218.

As Plaintiff explains, in this case Missouri was concerned that an approach that strictly applied a single set of numeric criteria for TN and TP could result in a lake being deemed “impaired” when that might not actually be the case. Pl. Br. p. 12. As outlined above, EPA issued its 2013 Guidance for establishing a combined criterion to address just such circumstances. Ex. 4 (2013 Guidance) p. 1 (“These guiding principles apply when states wish to rely on response parameters to indicate that a designated use is protected, even though a nitrogen and/or phosphorus level is/are above an adopted threshold.”).

Missouri’s combined criteria (considered as a single integrated criterion) consists of three elements: (a) Response Impairment Thresholds for chlorophyll-a, i.e., ceilings above which a lake is deemed impaired; (b) numeric Nutrient Screening Thresholds for chlorophyll-a, TN and TP, i.e., floors which act as triggers for application of; (c) a set of five Response Impairment Endpoints, which result in a finding of impairment if any one of them is found to be present concurrent with one or more Nutrient Screening Thresholds. Ex. 1 (Decision Doc.) p. 18. EPA approved Missouri’s combined criterion after thoroughly reviewing the State’s submission, including its technical rationale document and public comments submitted during its rulemaking, public comments on EPA’s proposed rule, and conducting its own literature review. Ex. 1 (Decision Doc.) p. 8, Appx. EPA conducted an independent review of the information to confirm the State’s determination that the Response Impairment Thresholds would protect its designated use of a “wide variety of biota.” *Id.* at 21-22. EPA also independently confirmed that the values the State adopted as Nutrient Screening Thresholds were protective of aquatic life by comparing them to the values EPA derived in its own proposed rule. *Id.* at 22-23. It also documented its technical findings that the State’s Response Assessment Endpoints include numeric expressions of key indicators of nutrient pollution. *Id.* at 23-25.

Further, EPA's Decision Document describes at length EPA's evaluation of the operation of the State's criterion and explained how it functions to protect the State's aquatic life use. *Id.* at 26-27. Finally, EPA evaluated the State's existing narrative criteria and explained its basis for concluding that such criteria can be used for site-specific application to the extent necessary to protect uses other than the aquatic life. *Id.* at 13. Based on its review, EPA appropriately concluded that the State's combined criterion meet the requirements of 40 C.F.R. § 131.11(a): they are based on sound science, protect the designated use, and along with the full suite of criteria in the State's water quality standards, support the most sensitive use.

In asserting that EPA's approval of the Challenged Criteria is arbitrary and capricious, Plaintiff rarely – if ever – refers to data or evidence in the administrative record to argue that the nutrient criteria at issue are technically unsound. Even when they do, such as when they refer to the multiple studies EPA reviewed regarding nutrient impacts on sport fish and other aquatic life, Plaintiff merely asserts that the studies are “all over the map.” Pl. Br. p. 24. This is hardly evidence that EPA's own detailed review and judgment based on that review is arbitrary and capricious, particularly given the deference to be accorded to EPA for such highly technical determinations within the Agency's area of expertise. *See* pp. 25-26, *supra*. As is the nature of scientific inquiry, studies have different methods and results. EPA carefully evaluated these studies and all data and drew general conclusions where warranted and specific inferences from studies that were most informative for the decision at hand. *See* Ex. 1 (Decision Doc.) pp. 14-20.

Rather than focusing on the data, Plaintiff attempts to support its position mostly with a “story” of past EPA critiques contained in either EPA's 2011 Disapproval of a wholly different set of criteria, or its comments on preliminary State draft criteria generated after 2011. Plaintiff then implies that it was “politics” that altered EPA's view, attempting to overturn EPA's

approval of the Challenged Criteria not based on a showing that EPA's view of the science is factually and technically unsupportable, but rather on implications of political intrigue. For instance, Plaintiff cites to EPA's agreement to include in its Proposed Rule an alternative with a structure similar to that proposed by Missouri, or to communications with the State about potential flaws in its own draft criteria. But Plaintiff mistakes the cooperative federalism under which EPA must, subject to federal regulatory requirements, respect a state's choices in regulating its waters, EPA SOF 1-3, for something nefarious.

EPA's 2011 Disapproval and its comments on drafts is nothing more than evidence of EPA doing its job, which is to work with states to ensure that proposed standards can ultimately be approved. In this case, EPA reviewed and scrutinized the Challenged Criteria actually submitted in 2018 and approved *them*. This approval was the result of an iterative process where EPA reviewed and considered the data, applied its technical expertise, and reasonably concluded that the Challenged Criteria are scientifically sound and protective of the State's designated uses.

While Plaintiff may disagree with EPA's conclusions, such disagreement is not a basis to overturn an agency's determination. Any party may question various scientific determinations, but that is insufficient to overturn the agency's conclusion, as such party must satisfy its burden of establishing that EPA's approval of the Challenged Criteria is not "supportable on any rational basis." *Missouri River*, 421 F.3d at 628. That burden has not been satisfied here.

II. MISSOURI'S WATER QUALITY STANDARDS PROTECT THE MOST SENSITIVE USES OF MISSOURI'S LAKES

A. EPA Rationally Determined that Missouri's Nutrient Standards are Adequately Protective of the State's Designated Use

When reviewing whether a state's nutrient criteria protect the most sensitive use, EPA considers all elements of water quality standards combined to provide the necessary protection. Ex. 1 (Decision Doc.) p. 10. *See also Natural Resource Defense Council, Inc. v. EPA*, 16 F.3d 1395,

1404-05 (4th Cir. 1993). EPA regulations: (a) require that criteria support the most sensitive use for waters with multiple use designations; (b) define criteria as elements expressed as concentrations, levels or narrative statements; and (c) allow for states to adopt both numeric and narrative forms of criteria. 40 C.F.R. §§ 131.11(a), (b). The regulations do not specify that a single individual criterion expression protect every designated use or the most sensitive use. In fact, it is typical for both EPA recommendations for criteria, and the criteria that states adopt, to be tailored to a particular use (e.g., “aquatic life” or “human health”). The requirement for criteria to support the most sensitive use applies to the entire suite of criteria in a state’s water quality standards as a whole, not to a single criterion. This is the basis for EPA’s “holistic” evaluation of state criteria described in its 2018 decision document, which is rooted in EPA’s regulations. Ex. 1 (Decision Doc.) pp. 8-9. *See also* p. 31, *infra* (citing cases).

In this case, Missouri established its nutrient criteria to protect aquatic life. Ex. 2 (2017 Rationale) pp. 4-5. Plaintiff disputes that the numeric values the State adopted to protect aquatic life will also protect other designated uses in the Plains ecoregion. Plaintiff cites to the State’s *initial* recommendation based on limited available microcystin data, which appeared to suggest that a chlorophyll-a response impairment level of 25 µg/L was needed to protect drinking water in the Plains ecoregion. Pl. Br. pp. 13-15. Because that numeric value is below (i.e., more stringent than) the 30 µg/L standard in the final Challenged Criteria, Plaintiff asserts that the State’s nutrient criteria fail to protect the most sensitive use in lakes within the Plains ecoregion. *Id.*, citing Ex. 2 (2017 Rationale) p. 4.

Upon its further review, the State found, and EPA agreed, that the microcystin data suggesting a level of 25 µg/L as a chlorophyll-a impairment threshold was insufficient to support setting an impairment threshold at that level. Ex. 1 (Decision Doc.) p. 10; Ex. 2 (2017 Rationale)

pp. 4-5. As EPA explained, the State is required to “develop criteria that are protective for all uses for which *adequate data and scientific information exist.*” Ex. 10, p. 1 (emphasis added). EPA found that the State’s record documented its consideration of the existing information and its determination that it was inadequate for purposes of deriving the numeric criteria for drinking water or recreation uses. Ex. 1 (Decision Doc.) pp. 10-11 (emphasis in original). As EPA explained (*id.*):

MDNR had considered developing a numerical criterion for protecting drinking water, provisionally considering a value of 25 µg/L for chlorophyll *a* based on analyses of available microcystin data in Missouri’s lakes and a review of disinfection byproducts information from Missouri drinking water treatment plants. However, as explained in its Rationale document, MDNR considered the existing information relating to microcystin (a type of cyanotoxin) and determined that the existing information was inadequate for purposes of deriving nutrient criteria (MDNR 2017). MDNR is in the process of collecting additional data, including data for additional toxins other than microcystin, and believes that “additional data will help clarify the extent of algal toxins in Missouri’s lakes, and combined with continued improvements in our understanding of both the factors that drive toxin production and the efficiencies of treatment in removing algal toxins from source water, will allow the state to better address drinking water protection during a future rulemaking.” *Id.* Because EPA has not published 304(a) recommended criteria, nor provided specific guidance, tailored to protect a drinking water supply use, the Agency supports the State’s position that it needs to collect more data and conduct further analysis before establishing numeric expressions for nutrients in their water quality standards. This is a matter of evolving science. As indicated in a recent document developed by the Interagency Working Group on the Harmful Algal Bloom and Hypoxia Research and Control Act, the EPA is itself “developing, in collaboration with states, Lake Numeric Nutrient Criteria that will inform how phosphorus and nitrogen concentrations contribute to HABs and drinking and recreational water criteria and swim advisories” (D’Anglada et al. 2018).

Plaintiff points to nothing in the record that controverts the State’s conclusion -- and EPA’s agreement -- that there was insufficient data as of now to support the conclusion that a level of chlorophyll-*a* of 25µg/L or below was required to protect drinking water in the Plains ecoregion. Similarly, Plaintiff fails to cite to any evidence in the record that supports a conclusion that approval of the 30 µg/L chlorophyll-*a* impairment threshold was irrational.

The fact that there is insufficient data to derive a numeric nutrient criterion for drinking water, and that this is an area of “evolving science,” *id.*, does *not* support Plaintiff’s view that EPA acted arbitrarily in approving an impairment threshold that is moderately higher than a preliminary estimate (of 25µg/L). Instead, the lack of data supports EPA’s determination that the State’s decision to defer setting separate numeric drinking water criteria until there are sufficient data and studies is reasonable. Ex. 1 (Decision Doc.) pp. 10-11. And that is a highly technical determination that should not be overridden. *Miami-Dade Cty. v. EPA*, 529 F.3d 1049, 1065 (11th Cir. 2008) (“EPA is compelled to exercise its judgment in the face of scientific uncertainty unless that uncertainty is so profound that it precludes any reasoned judgment.”); *Ethyl Corp. v. EPA*, 541 F. 2d at 28 (the “Administrator may apply his expertise to draw conclusions from suspected, but not completely substantiated, relationships between facts, from trends among facts, from theoretical projections from imperfect data, from probative preliminary data not yet certifiable as ‘fact,’ and the like.”). EPA’s judgment regarding whether the data does, or does not, support a position, must be upheld unless it is irrational. *Cent. S. Dakota Co-op Grazing Dist. v. Dep’t of Agric.*, 266 F.3d 889, 894 (8th Cir. 2001), quoting *Friends of Boundary Waters Wilderness v. Dombeck*, 164 F.3d 1115, 1129 (8th Cir. 1999) (“[E]ven assuming data are flawed,” substantial deference requires the ruling be reversed only if “there is a significant chance that but for the errors the agency might have reached a different result.”); *SW Bell Tel. Co. v. FCC*, 153 F.3d 523, 535 (8th Cir. 1998). Plaintiff has failed to establish that it was irrational for EPA to agree that there was insufficient data to support setting a drinking water chlorophyll-a Impairment Threshold lower than 30µg/L.

Furthermore, as EPA explained, the State maintains narrative criteria that are designed to protect against harm to drinking water or recreational uses, should there arise a circumstance

where the combined Challenged Criteria might not do so. Ex. 1 (Decision Doc.) p. 11 (describing narrative criteria), Appx. p. 2. EPA found that these pre-existing narrative criteria “sufficiently address the types of harm excess nutrients may present to lakes designated for drinking water supply and recreational uses” *Id.* at 11. It is not true that a numeric criterion is necessarily superior to a narrative criterion. A poorly developed and unsupported numeric criterion can detract from applying a more general but fully protective narrative criterion.

Plaintiff asserts that nothing in EPA’s 2011 Disapproval suggests that Missouri could rely on pre-existing narrative criteria to meet their CWA obligations and asks, if this were the case, why didn’t EPA require the State to revise the numeric criteria in 2011? Pl. Br. p. 15. This question entirely misses the context of the 2011 Disapproval. EPA did not determine that numeric nutrient criteria were necessary to meet CWA requirements for Missouri lakes (which EPA could do but has not done). EPA disapproved the specific numeric nutrient criteria the State submitted and specified two changes: (1) “The state must revise the criteria to clearly indicate which designated uses the criteria is intended to protect as well as supporting documentation to indicate that the criteria in fact will fully support the associated use;” and (2) “supporting documentation needs to include the raw data and resulting statistical analyses so that the EPA may evaluate the soundness of the scientific rationale and protectiveness of the criteria pursuant to the requirement found at 40 CFR § 131.11(a)(1).” Ex. 6 (2011 Disapproval) p. 28. This is not a determination that numeric nutrient criteria are required. Rather, it is a restatement of EPA regulations stating that *if* numeric nutrient criteria are to be developed and adopted, they must identify the designated use(s) to be protected and be fully documented.

While Plaintiff focuses on a single numeric value to argue that a given use (drinking water) is not adequately protected in all lakes in a given ecoregion (the Plains), such an approach

is not required under applicable regulations. Instead, a state may rely on the “application of existing, separate narrative criteria,” including solely narrative criteria, to protect the most sensitive uses. *Id.* Indeed, “[t]he CWA endorses a holistic approach to the nation’s waterways.” *El Dorado Chemical Co. v. EPA*, 763 F.3d 950, 958 (8th Cir. 2014). *See also, Nat. Res. Def. Council v. EPA* 16 F.3d at 1404-05 (upholding use of holistic approach in assessing whether nutrient criteria address the most sensitive use.). That is exactly the approach EPA took here. It looked at Missouri’s combination and levels of numeric impairment and screening thresholds, along with the Response Endpoints *and* existing narrative criteria applicable to all designated uses, and determined that as a whole they protect the most sensitive uses. Ex. 1 (Decision Doc.) pp. 8-9.

Ultimately, Plaintiff does not challenge EPA’s holistic approach, never expressly claiming that it is unauthorized *or* arbitrary and capricious. Pl. Br. pp. 14-15. Indeed, Plaintiff cites to EPA’s explanation of how existing narrative criteria, such as observations of a lake’s color, odors, and turbidity, help determine safety levels required for drinking water and recreation. *Id.* Yet, Plaintiff makes no attempt to dispute EPA’s explanation and cites to nothing in the administrative record that would cast doubt on EPA’s conclusions. Pl. Br. p. 14 (citing Pl. Ex. 29); Pl. Br. at p. 15 (Plaintiff is “[l]eaving aside” that issue). EPA’s conclusion that Missouri’s Challenged Criteria *as a whole* protect the most sensitive uses is rational, and Plaintiff has not proved otherwise.

B. EPA’s Determination Must be Based on the Criteria Submitted for its Approval, Not on Defects in Prior Drafts of Nutrient Criteria

Concentrating its focus on past draft criteria rather than the Challenged Criteria that EPA actually approved, Plaintiff asserts that EPA’s approval of the Challenged Criteria is a repudiation of its 2011 Disapproval. *Id. See also id.* at p. 17 (asserting that because the State proposed only stand-alone numeric criteria a decade ago, it “was reasonable for EPA to limit

MDNR's choices in this fashion" in 2018. Pl. Br. p. 17). But the approval of the Challenged Criteria does not repudiate EPA's 2011 Disapproval; it represents EPA's technical conclusions on a wholly distinct set of nutrient criteria. *See* EPA SOF 32, describing some of the fundamental differences between the 2011 criteria and the 2018 Challenged Criteria.

If EPA reviews a state's criteria and determines they do not meet the statutory requirements, EPA must specify the changes to meet the statute's requirements. 33 U.S.C. § 1313(c)(3). This allows a state to resubmit the criteria after addressing the defects. If the state does not revise its standards accordingly, EPA must develop its own standards for the State. *Id.*

At the same time, the statute plainly contemplates that state action may obviate the need to promulgate final federal standards. 33 U.S.C. § 1313(c)(4). Nothing prevents the state from submitting a whole new set of criteria, which it may base on a completely different framework. As the statute declares: "The Administrator shall promulgate any revised or new standard under this paragraph not later than ninety days after he published such proposed standards, unless prior to such promulgation, such State has adopted a revised *or new water quality standard* which the Administrator determines to be in accordance with this chapter." *Id.* (emphasis added).

There simply is no requirement that the State use the same approach, nor is the Administrator required to reassess the old proposed standards. Instead, the statute unambiguously states that newly adopted standards submitted by the State shall be approved if the "Administrator determines [them] to be in accordance with this chapter." *Id.* Indeed, in its ruling denying a Motion to Intervene in the prior case, this Court explained that water treatment facilities did not have standing to intervene because the determination of the nutrient criteria to be applied could be very different than the criteria rejected by EPA in 2011, noting for instance that although "EPA found Missouri's data unsuitable in 2011, it does not necessarily follow that

the EPA . . . would have no data in 2016 to tailor its criteria to [Missouri's] lakes.” Ex. 5, pp. 7-8 (Case No. 2:16-cv-04069-NKL, Doc. 25).

Beyond the lack of a statutory requirement, it is evident that EPA took no action in this particular case to restrict the State to using the same stand-alone wholly numeric framework that was the subject of the 2011 Disapproval. To the contrary, as Plaintiff concedes (Pl. Br. p. 15), the 2011 Disapproval affirmatively states that EPA would “support the state if they chose to modify their criteria beyond the original framework.” Ex. 6 p. 29. And as EPA explained in its own rulemaking on the proposed rule, it took comments on “additional approaches that were considered.” 82 Fed. Reg. at 61,225 (Ex. 8).

Once new state-adopted standards are submitted, there is a new administrative process. EPA is not required to compare the newly submitted standards to a previously rejected set of state standards. And it certainly is not required to lock Missouri into the framework it sought to apply nine years earlier. While EPA may refer to the prior rejected standards, as it does in its 2018 Decision document, EPA’s statutory task is to examine the new standards and explain why *those* standards are, or are not, in conformance with statutory and regulatory requirements. 33 U.S.C. § 1313(c). Thus, EPA repudiated nothing, and Plaintiff’s reliance on EPA’s nine-year old review of a completely different framework is simply not germane to a determination of whether EPA’s approval of the State’s nutrient criteria submitted in 2018 is arbitrary and capricious.

Alternatively, Plaintiff asserts that even if EPA is not required to reapply its 2011 conclusions about one set of standards, to a wholly different set of standards, an “agency changing [its] policy or rescinding its regulation must offer a reasoned analysis for the change.” Pl. Br. p. 15, citing *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 514 (2009). Pl. Br. p. 15. But EPA changed no policy and rescinded no regulation in approving the Challenged Criteria.

Fox Television and its progeny apply to agency regulations and policies, not to case-specific determinations, and certainly not to technical judgments that are based on a different framework (combined criteria) and different data. Moreover, Plaintiff's factual assertion is incorrect. Plaintiff asserts: "In its 2018 discussion of the effectiveness of Missouri's narrative criteria, EPA does not acknowledge its 2011 disapproval of the previous criteria." Pl. Br. p. 16. In fact, EPA's 2018 Decision Document has a specific section labeled "Missouri 2009 Submission and the EPA's 2011 Disapproval," Ex. 1, pp. 2-3, and otherwise discusses aspects of that disapproval as well as the State's post-2011 draft criteria that were never submitted. *Id.* at pp. 8-9, referring to EPA's May 12, 2016 letter commenting on draft criteria never submitted.

Nor did EPA reach "diametrically opposite conclusions based on the same facts," as Plaintiff alleges. Pl. Br. p. 16. As outlined, EPA was reviewing a different framework and set of criteria expressed as a combined criterion, which includes stand-alone Response Impairments Thresholds for chlorophyll-a, Nutrient Screening Thresholds for both causal (TP and TN) and response (chlorophyll-a) criteria, and five Response Assessment Endpoints to be applied, *none* of which were part of the State's proposal disapproved in 2011. EPA also reviewed new data, studies, and information which EPA expressly stated was lacking in its 2011 review. EPA did not reach an opposite conclusion based on the same criteria; it reached a new conclusion based on a completely different framework and new data.

When one considers Missouri's Challenged Criteria as a whole and the lack of sufficient available data to support development of a specific numeric nutrient criteria for drinking water supply and recreational uses, and applying the significant deference that must be applied to the technical determination at issue, EPA's approval of the Challenged Criteria should not be deemed to be arbitrary and capricious.

III. MISSOURI'S COMBINED CRITERIA ADEQUATELY PROTECT A WIDE VARIETY OF AQUATIC LIFE

Plaintiff argues that EPA's approval of the Challenged Criteria, which are based on the protection of aquatic life, is arbitrary and capricious because the Criteria focus on the protection of sport fish. Pl. Br. pp. 23-27. Plaintiff contends that with regard to whether the Challenged Criteria will be protective not only of sport fish but of a "wide variety of biota," "the record is not at all clear," stating that the "studies are all over the map; some showing a positive link between the growth of prey fish [and other non-sport fish biota] with increasing levels of nutrients," and some showing a negative link or no connection. *Id.* at 24.

This is hardly evidence that EPA's approval of the Challenged Criteria is arbitrary and capricious. Plaintiff points to no data or information in the record that establishes that the Challenged Criteria will leave significant numbers (or any, for that matter) of non-sport fish species unprotected. In asserting that a technical determination of an agency is arbitrary and capricious, it is not enough to sit back and say, "I am not convinced, I would like to see more evidence." Instead, a Plaintiff must point to evidence in the record that establishes that EPA's determination is, in fact, arbitrary, and Plaintiff fails to do so.

In any event, EPA provided a rational basis for approving the State's approach in concluding that aquatic life was protected by the Challenged Criteria. As with their other arguments, Plaintiff again focuses on the impairment threshold for chlorophyll-a, ignoring the screening thresholds and Response Endpoints that are *together* designed to protect aquatic biota (i.e., the holistic approach described *supra*). While the focus of the State's aquatic life criteria is on sport fish, it is not exclusive. As outlined, part of the process includes the application of the Response Endpoints. For example, the first Endpoint, which is labeled occurrence of fish kill events, actually covers impacts to various types of aquatic organisms, including different types

of fish (not just sport fish), amphibians, turtles, and invertebrates, such as mussels, crayfish, mayflies and aquatic worms. Ex. 2 (2017 Rationale) p. 29. In addition, the fourth Endpoint, observed shifts in aquatic diversity attributed to eutrophication, also explicitly addresses various types of aquatic organisms. Thus, the Challenged Criteria are explicitly based on the protection of a wide variety of aquatic life.

Moreover, EPA reviewed the technical studies, data, application of similar standards in other states' ecoregions, and the entire nutrient criteria framework to be applied by the State, and concluded based on its technical expertise that the numeric elements of the Challenged Criteria were reasonable. For instance, EPA reviewed numerous studies, fifteen of which it briefly summarized in its decision document. Ex. 1 (Decision Doc.) pp. 14-16. These studies showed, *inter alia*, that increased nutrient levels up to a certain point correlate with increased fish biomass and an increasing abundance of "most, if not all, fish species." *Id.* at p. 16.

Pursuant to its review of the many studies and the data, EPA found that there is no single level of nutrients that can be deemed to be beneficial or protective of all aquatic life. As EPA explained, "[t]he available scientific literature does not identify a universal point on this spectrum of algal growth, measured by chlorophyll-a, where meaningful shifts in populations would occur in lakes. Rather, the shifts can occur at different levels depending on many other biotic and abiotic factors. The particular mix of species that is desired for a manmade lake is more a matter of preference and judgment than a matter of science." Ex. 1 (Decision Doc.) p. 16. As outlined at p. 33, *supra*, where the data are incomplete or evidence inconclusive, EPA's determination must be upheld, in the absence of a showing that its conclusion is irrational.

But EPA did not leave it there. EPA considered the standards in other states. As EPA found, the numeric criteria that Missouri settled on are consistent with those applied to protect

aquatic life in other ecoregions and states, and in particular with regard to man-made lakes, which predominate in Missouri. Ex. 1 (Decision Doc.) pp. 19-20.

Plaintiff counters that chlorophyll-a criteria in Minnesota cover a range over their ecoregions up to 30 µg/L. Pl. Br. p. 26. That is the same in Missouri, where chlorophyll-a impairment threshold ranges from 15 µg/L in the Ozarks ecoregion to 30 µg/L in the Plains ecoregion. Ex. 2 p. 26; Pl. Br. p. 9. Other states have similar or even higher levels of chlorophyll-a required to find impairment, such as Arizona (ranging from 30-50µg/L), South Carolina (10-40 µg/L), North Carolina (15-40µg/L), and Virginia (10-60µg/L). Ex. 2 (2017 Rationale) p. 9. Some of these states, such as Virginia, also look to recreational sport fish as an indicator of the health of aquatic life in establishing these standards. *Id.* at 7. *See also* Ex. 1 (Decision Doc.) at Appx. p. 2.

“EPA’s review of state water quality standards ‘require the sort of scientific judgement that is the hallmark of agency discretion.’” *Sanitary Bd. of City of Charleston v. Wheeler*, 918 F.3d 324, 330 (4th Cir. 2019) If the agency’s “determination is supportable on *any rational basis*, a court *must* uphold it, especially ‘when an agency is acting within its own sphere of expertise.’” *National Parks Conservation Ass’n v. McCarthy*, 816 F.3d 989, 994 (8th Cir. 2016) (emphasis added, citation omitted). Plaintiff points to nothing in the record that leads to a conclusion that the numeric impairment levels established by the State to protect aquatic life, which it based on protection of sport fish, have no rational basis.

IV. MISSOURI’S COMBINED CRITERIA FRAMEWORK IS SUFFICIENTLY PROTECTIVE OF THE STATE’S AQUATIC LIFE DESIGNATED USE

After a comprehensive review of multiple studies, the data, the nature of Missouri’s lakes, and the operation of Missouri’s combined criteria, EPA concluded that the criteria were protective of aquatic life, defined as a wide variety of biota. Ex. 1 (Decision Doc.) pp. 12-25.

Plaintiff attempts to attack this determination by focusing on small differences between Missouri's approach and EPA's 2013 Guidance, which EPA issued to assist states that wanted to utilize a combined criterion approach in determining whether a waterbody is meeting designated uses despite elevated TN and TP levels.

Plaintiff argues that EPA's approval of Missouri's combined criterion is invalid because it does not adhere precisely to the 2013 Guidance. Plaintiff contends that EPA's approval of Missouri's combined criterion must be deemed arbitrary and capricious because: (a) the combined criterion allegedly only seeks to restore water quality, rather than protect designated uses prior to impairment; and (b) not all of the causal and response criteria are numeric, which Plaintiff contends the 2013 Guidance requires. Pl. Br. pp. 17-23. Plaintiff's arguments fail because: (a) strict adherence to each element of the 2013 Guidance is not required or otherwise a basis for finding EPA's determination arbitrary; and (b) Missouri's Challenged Criteria are generally consistent with the 2013 Guidance and are protective of the State's designated uses.

A. The Principles Explained in the 2013 Guidance are Not Regulatory Requirements and are Not Otherwise Required

To the extent there were differences between the Challenged Criteria and the 2013 Guidance, EPA did not find them to be material, because the Challenged Criteria were based on sound science and were sufficiently protective. EPA concluded that while the Challenged Criteria "differs from EPA's 2013 Guiding Principles in a number of ways [,] like all agency guidance documents, the Guiding Principles provide recommendations to states and stakeholders, but the agency cannot mandate any specific action, outcome or requirement through guidance EPA has determined that despite some differences, the criteria are based on a sound scientific rationale and are designed to protect the aquatic [resources]." Ex. 1 (Decision Doc.) p. 23.

Equating the Guidance to a binding regulation, Plaintiff asserts that EPA's approval of the Challenged Criteria *must* be deemed arbitrary and capricious because the State failed to adopt all EPA-suggested procedures. Pl. Br. pp. 18-23. But that is not the case. The 2013 Guidance is just that, a guidance document. It does not require or demand any specific procedure. Instead, it is designed to "offer clarity to states about an optional approach for developing a numeric nutrient criterion that integrates causal (nitrogen and phosphorus) and responsive parameters into one water quality standard (WQS)." Ex. 4 (2013 Guidance) p. 1.

Plaintiff insists that the Guidance is not merely a document to "offer clarity to states about an optional approach," but rather a proclamation whose every element must be strictly followed. A brief examination of the Guidance demonstrably establishes otherwise.

In determining whether an agency has issued a binding norm or merely 'an unreviewable 'statement of policy, we are guided by two lines of inquiry.' [Citation omitted]. One line of analysis considers the effects of an agency's action, inquiring whether the agency "has '(1) impose[d] any rights and obligations, or (2) genuinely left the agency and its decisionmakers free to exercise discretion.'" *CropLife Am. v. EPA*, 329 F.3d 876, 883 (D.C. Cir. 2003).... The second line of analysis looks to the agency's expressed intentions. *CropLife Am.* 329 F.3d at 883. This entails a consideration of three factors: "(1) the agency's own characterization of the action; (2) whether the action was published in the Federal Register or the Code of Federal Regulations; and (3) whether the action has binding effects on private parties or on the agency. *Molycorp, Inc. v. EPA*, 197 F.3d 543, 545 (D.C. Cir. 1999) ["*Molycorp* factors"].

Ctr. For Auto Safety v. Nat'l Highway Traffic Safety Admin., 452 F.3d 798, 806-07 (D.C. Cir. 2006). *See also Iowa League of Cities v. EPA*, 711 F.3d 844, 867 (8th Cir. 2013) (adopting the three *Molycorp* factors).

As to EPA's characterization of the 2013 Guidance, the Guidance itself declares: "These guiding principles *do not impose legally binding requirements* on the EPA, states, or the regulated community, nor do they confer legal rights or impose legal obligations upon any member of the public." Ex. 4 (2013 Guidance) p. 1 (emphasis added). Further, the Guidance has

no earmarks of a regulation or binding rule. It is a four-page document in outline form that was not published in the Federal Register. Finally, in assessing whether an agency action is binding, the language used by the agency is a critical consideration. *Ctr. For Auto Safety* 452 F. 3d at 798; *Cnty. Nutrition Inst. v. Young*, 818 F.2d 943, 946 (D.C. Cir. 1987). As noted, the Guidance expressly declares that it does not “impose[s] legally binding requirements on the EPA, states, or the regulated community. . . .” Instead, the Guidance reaffirms that states “have the option of adopting water quality criteria based on EPA’s CWA section 304(a) criteria guidance, section 304(a) criteria guidance modified to reflect site-specific conditions, or *other scientifically defensible methods*.” 82 Fed Reg. 61,217/3 (Ex. 8) citing 40 C.F.R. § 131.11(b)1) (emphasis added). As outlined *supra*, EPA found that Missouri used “scientifically defensible methods.”

Plaintiff further contends that EPA’s approval of the Challenged Criteria must be struck down because EPA did not explain to Plaintiff’s satisfaction why it did not strictly apply the various suggestions in that Guidance. Pl. Br. pp. 20-21. But there is no requirement that an agency explain why it has approved an action that does not strictly comport with every element of a non-binding guidance, and the cases cited by Plaintiff do not hold otherwise.

Plaintiff cites *Utahns for Better Transp v. U.S. Dep’t of Transp.*, 305 F.3d 1152, 1165 (10th Cir. 2002), Pl. Br. 20, which merely says that in implementing the National Environmental Policy Act an agency must follow its own regulations. The case had nothing to do with a non-binding guidance document. In *Town of Barnstable v. FAA*, 659 F.3d 28, 36 (D.C. Cir. 2011), at issue was whether the FAA had to explain diversion from its own internal handbook, not a guidance document designed to provide general assistance to regulated entities. Moreover, there was no claim by the FAA that the handbook was non-binding. Finally, Plaintiff cites *National Mitigation Banking Ass’n v. U.S. Army Corps of Engineers*, No. 06-cv-2820, 2007 WL 495245

(N.D. Ill Feb. 14, 2007), for the proposition that in *some* circumstances, an agency's noncompliance with its own guidance can be a basis for finding that the agency acted in an arbitrary and capricious manner. Pl. Br. p. 21. The court there provided no explanation of when or how noncompliance with an agency guidance can lead to a finding that an action was arbitrary and capricious and made no such finding in that case.

The 2013 Guidance does not direct agency personnel to adhere to strict procedures or otherwise cabin their discretion. Instead, it is directed to regulated entities, offering alternative approaches they may want to consider when generating nutrient criteria specific to their own geographic and ecological circumstances. There is no requirement that in approving a state's criteria, the approving federal agency must explain why it did not require the state to follow each and every one of its non-binding recommended alternatives or procedures.

In any event, EPA *does* provide the explanations Plaintiff asserts are missing, and Plaintiff admits as much. As to the issue of whether the criteria adequately protect lakes before they are impaired or instead just seek to restore already impaired lakes, MCE declares: "EPA does not address the restoration issue, *except* to assert that the existence of a chl-a cap resolves the problem." Pl. Br. p. 21 (emphasis added). Referring to its second issue, that the Response Endpoints are required to all be numeric, MCE declares that "EPA nonetheless approved them [the Response Endpoints], finding that they were 'sufficiently numeric.'" *Id.* Indeed, Plaintiff challenges these conclusions. *See* discussion *infra*. Plaintiff may not find EPA's explanations to be satisfactory, but by its own admission EPA explained the precise two issues Plaintiff raises.

B. Missouri's Response Criteria are Designed to Protect Designated Uses Before Being Impaired, Not Merely Restoration of Impaired Waters

Even if the suggestions in the 2013 Guidance are viewed as mandatory requirements, EPA found that they were effectively complied with. Plaintiff asserts that Missouri's combined

criterion is not sufficiently protective of the designated uses of Missouri lakes because it includes response parameters, which require some showing of adverse conditions. Plaintiff contends this violates EPA's 2013 Guidance on combined criteria, which to the extent the criteria include numeric values, states that they "must be set at levels that protect uses, i.e., before adverse conditions that will require restoration." Pl. Br. 18 citing Ex. 4 (2013 Guidelines) quoted at p. 2.

Even assuming, *arguendo*, that the Guidance is more than a mere recommendation, Missouri's criteria are consistent with the quoted language from the Guidance. As explained, *supra*, Missouri's nutrient criteria set specific impairment levels (i.e. Response Impairment Thresholds) for chlorophyll-a, which evidence when a lake will be deemed impaired. The Nutrient Screening Thresholds, by contrast, apply before the lake "suffers adverse conditions that will require restoration." *Id.* For example, the Response Impairment Threshold for chlorophyll-a in the Plains ecoregion is 30µg/L, while the Nutrient Screening Threshold for chlorophyll-a in the Plains is 18µg/L. Under this framework, if the 18 µg/L Nutrient Screening Threshold is reached in a lake and a Response Endpoint is present, the lake will be deemed impaired, i.e., an impairment declaration will be made *before* the lake would otherwise be deemed impaired if just numeric Response Impairment Thresholds were applied.

The same is true for TN and TP. Under the Challenged Criteria, these are set as Nutrient Screening Thresholds and therefore apply *before* restoration of the waterbody would be required. Thus, the State's numeric criteria are designed to identify waterbodies where nutrient loads should be restricted before they become impaired. Ex. 2 (2017 Rationale) p. 6. *See also* Ex.1 (Decision Doc.) p. 28 and Appx. pp. 1-2, explaining that EPA determined that "all the criteria components of MDNR's final rule to be set at protective levels." As is the case for exceeding *any* established criteria, the Response Assessment Endpoints reflect conditions to be avoided and

EPA's decision document specifically addresses the issue of using the combined criterion to effect necessary source controls to protect waters before they become impaired. *Id.* at 19-20.

Plaintiff asserts that Missouri's standards are somehow an outlier when compared with all other states with combined criteria. Plaintiff cites the criteria in Minnesota, where "a lake is not meeting its designated use of aquatic life and recreation when [it] exceeds the causal parameter (TP) while at the same time exceeding one of four response indicators, all of which are numeric values." Pl. Br. p. 19. Similarly, in Missouri under the Challenged Criteria, a lake is not meeting the standards required to protect the designated uses when it exceeds the Nutrient Screening Threshold for TP (*or* for TN, *or* for chlorophyll-a), while at the same time exceeding any one of five response indicators, the Response Endpoints.

Plaintiff claims that EPA found that Missouri's approach was "problematic" and "contrary to long standing science." Pl. Br. p. 19, citing AR 4039. But in fact, EPA found the opposite, concluding that Missouri's combined criterion is not problematic, in part because the State has included stand-alone chlorophyll-a Response Impairment Thresholds, which ensures that corrective actions will be taken if a lake is, in fact, already impaired. Ex. 1 (Decision Doc.) p. 24. That is why EPA concluded that "screening threshold components" together with the "response assessment endpoints," reflect an appropriate floor below which adverse impacts from nutrient pollution should not occur, and thus EPA was confident that the combined criterion is protective of the aquatic life uses in Missouri. Ex. 1 (Decision Doc.) p. 20.

At bottom, Plaintiff's concern is with the use of any response parameters. As Plaintiff states, "[i]ntroducing any response variable into a nutrient criterion will necessarily incorporate some lag time between pollution and impairment when compared with a causal variable only." Pl. Br. p. 18. But the use of response parameters to set nutrient criteria is clearly permissible and

is the subject of the 2013 Guidance upon which Plaintiff relies. In any event, Plaintiff failed to show that the numeric portions of the Challenged Criteria are not “set at levels that protect uses, i.e., before adverse conditions that will require restoration.” Ex. 4 (2013 Guidance) p. 2.

C. The Response Endpoints are Sufficiently Numeric and Consistent with the 2013 Guidance

Plaintiff cites to a second recommendation in the 2013 Guidance, which suggests that causal and response parameters should be expressed numerically. Plaintiff asserts that three of Missouri’s five Response Endpoints are not numeric and this therefore dooms the Challenged Criteria because they violate the Guidance. Pl. Br. pp. 21-22.

Plaintiff’s argument is based on the recommendation that “[a]ll causal and response parameters should be expressed numerically.” Ex 4 (2013 Guidance) p. 3, ¶ 3.2. Here, it is indisputable that the Challenged Criteria establish both causal and response *numeric* criteria (Impairment and Screening values): for TN, TP, and chlorophyll-a. EPA SOF 30-34, *supra*. EPA further found that each of the Response Endpoints are, except for observed shifts in aquatic diversity, quantitative in nature. Ex. 1 (Decision Doc.) pp. 21-22. For instance, levels of pH and dissolved oxygen are measured in numbers. Ex. 1 (Decision Doc.) at Appx. p. 1. *See also id.* at pp. 20-22 describing the quantitative nature of the Response Endpoints.

Plaintiff does not dispute EPA’s conclusion that most of the Response Endpoints are quantitative, i.e., numeric. Instead, Plaintiff notes that EPA cited to the State’s Implementation Plan to help explain how the State will apply a quantitative approach to the application of the Response Endpoints. Plaintiff contends that because the Implementation Plan was issued after Plaintiff submitted comments on the Challenged Criteria, it may not be relied upon unless and until Plaintiff receives an opportunity to comment on that Plan. Pl. Br. pp. 21-22.

Plaintiff declares: “The [Implementation] Plan is not a WQS [water quality standard].” Pl. Br. p. 21. EPA agrees, which is why remand to allow comment on the Implementation Plan is not required. States that issue nutrient and other water quality standards must eventually implement those standards, through development of total maximum daily loads (“TMDLs”) of nutrients, permit requirements for point sources, and other methods. *See, e.g.*, 40 C.F.R. § 131.21(d). Those are separate procedures subject to separate notice and comment and separate challenges. An implementation plan is part of a state’s ongoing process to implement water quality standards but it is not part of the nutrient standards themselves. While EPA wanted to be informed of the implementation process and requested the plan, it was neither a part of the Challenged Criteria nor necessary to EPA’s ultimate approval of those Criteria.

In any case, EPA identified and addressed where the combined criterion submitted by the State differed with specific recommendations contained in the 2013 Guidance and found those criteria nevertheless to be substantially consistent with the Guidance because they “are based on a sound scientific rationale and are designed to protect the aquatic life uses.” Ex. 1 (Decision Doc.) p. 23. *That* is the ultimate finding challenged in the case, and Plaintiff has failed to establish that EPA’s conclusion in this regard is irrational.

CONCLUSION

For the foregoing reasons, Plaintiff’s Motion for Summary Judgment should be denied and Defendant’s Motion for Summary Judgment should be granted.

Respectfully submitted, this 10th day of November, 2020,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing document was filed electronically with the Clerk of the Court using the Electronic Court Filing System, which sends notification of such filing to the Counsel of Record in the above-captioned action.

Date: Nov. 10, 2020

/s/ Perry M. Rosen
PERRY M. ROSEN